

REMARKS

Claim 9 was rejected as being indefinite apparently for using improper Markush group language. Applicants contend that the claim was in proper format but have amended the claim to clarify its reading. Withdrawal of the rejection is requested.

The pending claims were rejected as being unpatentable over Duyvesteyn (WO 01/00530, hereinafter referred to as D1) and as being unpatentable over Duyvesteyn (US 6440383, hereinafter referred to as D2). Applicants respectfully traverse.

With respect to D1, the Examiner admits that D1 does not expressly state that the catalyzing sale is a mixture of two or more of NaCl, KCl, and LiCl and that D1 does "not expressly state the ratio of the catalyzing salts in the mixture". Presumably, the Examiner is referring to claims 9-11 and 44, but Applicants cannot be sure since it is not specified. In any event, the Examiner then cites to *In re Boesch*, 205 USPQ 215 (CCPA 1980) for the proposition that "it is well settled that determination of optimum values of cause effective variables such as these process parameters is within the skill of one practicing in the art".

In re Boesch, however, is not applicable to the present situation because the facts in *In re Boesch* differ from those in the present application. In *In re Boesch* the claim was a composition claim (not a process claim) and it related to a nickel base alloy having a composition consisting essentially of certain claimed ranges of constituents such as carbon, cobalt, and others. The prior art used to reject the claim disclosed nickel based alloys containing the **same** constituents in amounts where each of the ranges of constituents in the claimed alloys overlapped ranges disclosed by the prior

art. The court upheld the rejection because "the composition requirements of the claims and the cited references overlap" such that "the prior art would have suggested the kind of experimentation necessary to achieve the claimed composition" and noted that the conclusion accorded "with the rule that "discovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art". *Id.* at 219.

In the present case, there is no overlap because D1 does not recognize the use of a catalyzing salt that does not significantly change chemical composition, does not recognize using catalyzing salt that includes at least two of NaCl, KCl, and LiCl, does not recognize using a eutectic mixture (as required by claims 9-11 and 44), does not recognize using an amount of the catalyzing salt in an amount from about 3% by weight of the equivalent amount of titanium dioxide to about the amount corresponding to the saturation point of the catalyzing salt in the feed solution. When considering these many differences, one would not consider the facts of *In re Boesch* to be analogous to the present situation. Because the premise fails, the conclusion necessarily must fail.

While D1 discloses the use of $\text{SnCl}_2 \cdot 2\text{H}_2\text{O}$ in an amount to provide 6.3% Sn as wt% in TiO_2 , the $\text{SnCl}_2 \cdot 2\text{H}_2\text{O}$ is not one of the claimed chloride salts and it significantly changes its chemical composition as pointed out in the last Response. Therefore, D1 teaches away from the claimed process.

Moreover, absent from the rejection is any mention that the catalyzing salt (including two or more of NaCl, KCl, and LiCl) is present in an amount from about 3% by weight of the equivalent amount of titanium dioxide to about the amount

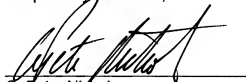
corresponding to the saturation point of the catalyzing salt in the feed solution. At best, D1 teaches only that minor quantities may be added, but there is no mention in D1 about what constitutes a minor quantity. Moreover, D1 does not mention that it is the aggregate of the two or more of NaCl, KCl, and LiCl that must be present in an amount from about 3% by weight of the equivalent amount of titanium dioxide In the absence of any showing of this limitation in the prior art, the rejection cannot stand.

Turning to D2, it suffers the same deficiencies as D1. In fact, in the sole example that shows the production of rutile crystals, D2 describes the use of oxalic acid and calcination at 920° C for 1 hour. These parameters, however, teach away from the presently claimed process conditions.

As for the dependent claims, the Examiner notes that D1 and D2 teach milling and washing, but the claims require washing and then milling. The Examiner also states that D1 and D2 teach recycling of the aqueous salt solution. While Fig. 2 shows recycling of the chemical control agent, this recycling is before the calcination and not after, as required by the claim. Thus, these dependent claims, as well as other dependent claims, are not rendered obvious by D1 and D2.

If there are any questions concerning this submission, the undersigned attorney can be reached at (312) 321-4276 to resolve any remaining issues.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'G. Peter Nichols', is written over a horizontal line.

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